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Higher petroleum alkyltoluenes: Evaluation of thermodynamic maturity

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Abstract

© 2015 Pleiades Publishing, Ltd. The problems associated with the state of thermodynamic equilibrium between isomers of higher petroleum alkyltoluenes with a normal alkyl chain have been discussed. Approaches to the assessment by graphical means of their level of thermodynamic transformation have been proposed. The range of the thermodynamic conversion of n-alkyltoluenes has been determined. It has been shown that the conventional basic kinetic model of isomerization does not fully describe the features observed in nature. C14, C18 and C22 alkyltoluenes have been synthesized and isomerized to establish their thermodynamic equilibrium in a mixture.

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Keywords

alkyltoluenes, crude oils, isomers, thermodynamic equilibrium